

REMARKS

In this response to the Office Action dated August 10, 2009, Applicants have amended Claim 10. Support for the amendment can be found through out the specification as originally filed, more particularly, at page 2, lines 22-26, page 41, lines 16-25, and in Fig. 8. Claim 19 has been canceled without prejudice. No new matter is added in this response. Claims 10, 11, 13, 18, and 20 remain pending. Claims 10, 11, 18, and 20 are presented for examination. Claim 13 remains withdrawn but will be eligible for rejoinder upon allowance of Claim 10. In view of the amendments and remarks herein, Applicants respectfully request reconsideration and issuance of the pending claims.

Claim 10

One patentable aspect of the claimed biosensor of Claim 10 is related to the configuration of the sample suction port present in the biosensor. As expressly disclosed at page 41, lines 16-25 of the specification, a projection of the claimed biosensor, which is formed at one side of an inner part of a holding space, facilitates introduction of a liquid sample by its capillary action at one side of the holding space. This eliminates the need to form an outlet for discharging gas at the inner part of the holding space. As set forth above, Claim 10 now describes this aspect more clearly by reciting that “the biosensor lacking an outlet for discharging as into the holding space”. In addition, the biosensor of Claim 10 comprises, among others, a holding space and a spacer sheet consisting of one sheet.

As discussed below, none of the references cited in the Office Action disclose the foregoing features of Claim 10. As such, Claim 10 is neither anticipated nor rendered obvious over these references.

Anticipation

Claims 10, 11, 13, 18, and 19 were rejected under 35 U.S.C. § 102(b) as being anticipated by Feldman *et al.* (U.S. Patent No. 6,299,757; “Feldman”). Applicants respectfully traverse the rejection.

In the office action, the Examiner asserted that the disclosures of Feldman, especially Figures 18 and 22 of the reference, would teach all the limitation of Claim 10. Applicants respectfully submit that the sensor of Feldman is significantly different from the presently claimed biosensor and some of these differences are explained below.

Feldman's sensor in Figures 18 does not anticipate the claimed invention

Illustrated below are the spacer shown in Fig. 18B of Feldman and the biosensor shown in Fig. 7(a) of the present specification.

Fig. 18B of Feldman

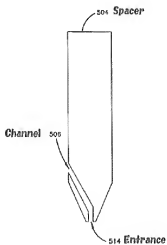
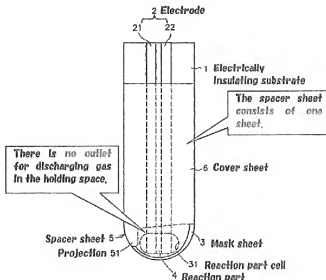


Fig. 7(a) of the present application



The spacer shown in Fig. 18B of Feldman comprises a main spacer and another spacer separated from the main spacer. In contrast, as is clear from Fig. 7(a) above, the spacer used in Claim 10 of the present invention is formed of a single sheet. This feature of the claimed biosensor has been explicitly recited in the pending Claim 10. Accordingly, the sensor shown in Fig. 18 of Feldman is different from the biosensor of Claim 10 of the present invention at least in terms of the structure of the spacer.

Furthermore, the sensor shown in Fig. 18 of Feldman is structured so that a liquid sample is made to flow from entrance 514 through channel 506. Therefore, the gas that is generated when the liquid sample is introduced into the sensor of Fig. 18 can be discharged from the channel. In other words, the channel 506 functions as a so-called outlet. In contrast, as disclosed on page 2, lines 22-26 (also in page 41, lines 16-25) of the specification, an object of the present invention is "to provide a biosensor with a simple structure that can smoothly introduce a liquid sample without leaving bubbles in the holding space of the liquid sample and without providing an outlet for discharging gas in the holding space". Accordingly, the biosensor of Claim 10 is not provided with an outlet. In this response, Claim 10 has been amended so as to limit the biosensor of the

present invention to that having no outlet. Accordingly, the sensor shown in Fig. 18 of Feldman and the biosensor of Claim 10 are also different in terms of the presence/absence of the outlet.

Furthermore, in the sensor of Feldman, a working electrode 502 is formed on a first substrate 500 and counter electrodes 510, 512 are formed on a second substrate 508 to conduct a measurement using these electrodes. However, as Applicants commented in the response of July 27, 2009 in the biosensor of Claim 10, an electrode section is formed on an electrically insulating substrate (1). Therefore, the sensor shown in Fig. 18 of Feldman is also different from the biosensor of Claim 10 in terms of the arrangement of the electrodes.

As described above, the structure of the sensor shown in Fig. 18 of Feldman is substantially different from that of the biosensor of Claim 10.

Feldman's sensor in Figures 22 does not anticipate the claimed invention

The spacer shown in Fig. 22B of Feldman and the biosensor shown in Fig. 7(a) of the present specification are explained below.

Fig. 22B of Feldman

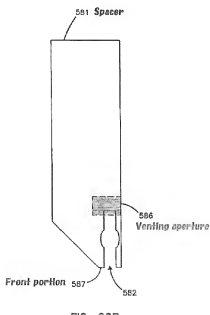
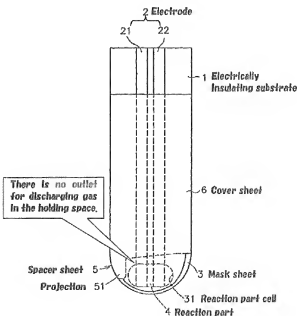


Fig. 7(a) of the present application



The sensor shown in Fig. 22 of Feldman comprises a venting aperture 586. Therefore, in the sensor shown in Fig. 22, even if a gas is generated at the innermost part in the channel 582, it is possible to discharge the gas from the venting aperture 586. As described above, Claim 10 now recites that "the biosensor lacking an outlet for discharging gas into the holding space" in this

response. Therefore, the sensor shown in Fig. 22 of Feldman is clearly different from the biosensor of Claim 10 in terms of the present/absence of outlet.

Moreover, Feldman's sensor is further distinguished from the claimed biosensor based on the lack of a holding space. As noted above, the claimed biosensor comprises, among others, a reaction part and a holding space. Feldman may teach a component corresponding to a reaction part; however it clearly fails to teach a holding space. Feldman discloses that a sample is drawn and held in the channel 582 formed on a spacer layer (Column3, lines 21-23). Feldman also discloses that a redox mediator and chemical sensor materials are disposed in the sample chamber (Column 8, lines 35-36). Feldman further discloses that the "channel" corresponds to the "sample chamber" (Column 34, lines 41-42). Specifically, a sample is introduced into the channel portion shown in Fig. 22B (i.e. the "sample chamber") and the measurement is conducted using the working electrode and the counter electrodes respectively disposed on and under the sample chamber. As such, the "sample chamber" may correspond to the "reaction part" defined in Claim 10 of the present application. However, the sensor shown in Fig. 22 of Feldman does not have any component, which may correspond to the holding space of Claim 10. Therefore, the sensor shown in Fig. 22 of Feldman is also different from the biosensor of Claim 10 in terms of the presence/absence of the holding space.

Furthermore, in the sensor of Feldman, a working electrode 580 is formed on the first substrate 579, and counter electrodes 585, 584 are formed on the second substrate 583. The measurement is conducted using these electrodes. In contrast, an electrode section is formed on an electrically insulating substrate (1) in the biosensor of Claim 10. Therefore, the sensor shown in Fig. 22 of Feldman is also different from the biosensor of Claim 10 in terms of the arrangement of the electrodes.

As described above, the structure of the sensor shown in Fig.22 of Feldman is totally different from that of the biosensor of Claim 10.

As noted, Feldman fails to teach a sensor teaching all the features of the biosensor claimed in Claim 10. Therefore, Claim 10 is patentable over Feldman for at least the reasons as discussed above. In light of Claim 10 being patentable, its dependent claims 11 and 18 are also in condition of allowance. Accordingly, Applicants respectfully request withdrawal of rejection to Claims 10, 11, and 18 under 35 U.S.C. § 102(b). Further rejoinder of Claim 13 is respectfully requested upon allowance of Claim 10. As Claim 19 is canceled, rejection to Claim 19 is now moot.

Obviousness

Claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Feldman in view of Bhullar (U.S. Patent No. 6,447,657 B1; "Bhullar"). Applicants respectfully traverse the rejection.

Claim 20 incorporates all the features of Claim 10 through its dependency from Claim 10. By structuring the biosensor of the present invention as defined by amended Claim 10, the features illustrated in Appendix attached to Applicants' response of July 27, 2009 can be attained. Specifically, this allows obtaining a biosensor with a simple structure that can smoothly introduce a liquid sample without leaving bubbles in the holding space of the liquid sample and without providing an outlet for discharging gas in the holding space. However, as noted, Feldman's sensor is fundamentally different from the claimed biosensor of Claim 10 and thus fails to teach or suggest various features of Claim 10. In addition, Bhullar fails to remedy the deficiencies of Feldman through a teaching of all of these features. As such, even if Feldman would be properly combined with Bhullar, the combination would still fail to teach or suggest all the features of Claim 10. Accordingly, a skilled artisan would not have any reason to create the present invention, which can achieve distinguishing effects by employing a specific structure that is distinct from the disclosure of the cited references. As such, Claim 10 and its dependent Claim 20 are patentable over the cited references. Withdrawal of the rejection and reconsideration of Claim 20 are respectfully requested.

Written description requirement

Claim 19 was rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claim 19 has been canceled and thus this rejection is now moot.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure,

including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

CONCLUSION

In view of Applicants' foregoing Amendments and Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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